BERKHMAN, D.L., dotsent (Leningrad); ITSKINA, R.S. (Leningrad); KAZARNOVSKAYA, O.S. (Leningrad); PERKHUROVA, A.I. (Leningrad); ROTENFEL'D, M.Z. (Leningrad).

Treatment of tuberculous meningitis in adults. Klin.med. 31 no.12:31-36 D '53. (MLRA 7:1)

1. Iz tuberkuleznogo otdeleniya bol'nitsy im. Kuybysheva.
(Tuberculosis) (Streptomycin) (Meningitis)

ROTENFEL'D, M.Z., kandidat meditsinskikh nauk (Leningrad)

Cancer of the tongue. Fel'd. i akush. no.7:15-18 Jl '54.
(TONGUE, neoplasms (MLRA 7:7)
*cancer)

BERKHMAN, D.L., dotsent; ROTENFEL'D, M.Z.

Roentgenomorphological characteristics of the dynamic aspects of miliary tuberculosis. Vest.rent. i rad. no.3:47-54 My-Je '55. (MLRA 8:10)

1. Iz tuberkuleznogo ob"yedineniya (glavnyy vrach K.I.Andreyev) Leninskogo rayona g. Leningrada.
(TUBERCULOSIS, MILIARY, radiography)

ROTENFEL'D, M.Z., kand.med.nauk

Pulmonary ventilation in therapeutic pneumoperitoneum. Sov.zdrav. Kirg. no.1:36-39 Ja-F '58. (MIRA 13:7)

1. Iz tuberkuleznogo ob"yedineniya Leninskogo rayona g. Leningrada (glavnyy vrach - K.I. Andreyev, nauchnyy rukovoditel' - dotsent D.L. Berkhman).
(RESPIRATION) (PNEUMOPERITONEUM, ARTIFICIAL)

ROTENFEL'D, M.Z., kand.med.nauk

Roentgenokymographic study of pulmonary respiration in combined treatment with phrenicoalcoholization and pneumoperitoneum [with summary in English]. Vest.rentg. i rad. 33 no.1:13-16 Ja-F '58. (MIRA 11:4)

1. Iz tuberkuleznogo ob"yedineniya Leninskogo rayona Leningrada (glavnyy vrach K.I. Andreyev, nauchnyy rukovoditel'-dotsent D.L. Berkhman).

(COLLAPSE THERAPY
artif. pneumoperitoneum & phrenicoalcoholization, roentgenokymography of pulm. resp. (Rus)
(KYMOGRAPHY, in various dis.
roentgenokymography of pulm. resp. in artif. pneumoperitoneum & phrenicoalcoholization in tuberc. (Rus)

ROTENFEL'D, V.M.; IVANOVA, A.N., KUZNETSOVA, A.M.; KHABAROVA, T.N.

Lower Cretaceous sediments of the northwestern part of the north-Caspian oil- and gas-bearing basin and adjacent territories. [Trudy] NIIneftegaza no.10:257-275 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti; Nizhnevolzhskiy nauchno-issledovatel'skiy institut geologii i geofiziki i Saratovskiy gosudarstvennyy universitet im. Chernyshevskogo.

ROTENFEL'D, V.M.

Characteristics of the distribution of the lithologic composition and thicknesses of Cretaceous sediments in the Volga Valley portion of Saratov Province and the adjacent regions of the Caspian Depression. Izv. AN SSSR. Ser.geol. 28 no.4:114-124 Ap '63. (MIRA 16:6)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti Glavnogo upravleniya geologii i okhrany nedr pri Sovete Ministrov RSFSR, Moskva.
(Saratov Province--Geology, Stratigraphic)
(Caspian Depression—Geology, Stratigraphic)

GRACHEVSKIY, M.M.; DUBOVSKOY, I.T.; ROTENFEL'D, V.M.; SEYFUL'-MULYUKOV, R.B.

Relationship between the terrigenous Devonian and Lower Cretaceous paleostructural patterns in the Volga Valley portion of Saratov and Volgograd Provinces. Geol. nefti i gaza 7 no.7:34-38 Jl '63. (MIRA 16:7)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti.
(Saratov Province--Geology, Structural)
(Volgograd Province--Geology, Structural)

S/058/62/000/004/004/160
A058/A101

26.2190

AUTHORS: Sus, A. N., Rotenko, A. M.

TITLE: Vibration manometer whose readings do not depend on the type of gas

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962. [illegible], abstract 4A135 ("Uch. zap. Saratovsk. un-t", 1960, v. 69, 113 - 117)

TEXT: There is described the design of a manometer based on a combination of vibration and membrane manometers. The manometer consists of two parts: a vibration pickup and a device attached to it, which consists of two firmly connected bellows. On a connecting rod between the bellows a metallic disk is located, which is connected with a vibrator via a system of thin rods. A high rarefaction is produced in one of the bellows (A), while the other bellows (B) is attached to the system in which the pressure is being measured. Bellows A has a support system which enables one to vary the upper limit of measurable pressures. Incident to evacuation of the gas from bellows B, this bellows is not compressed until bellows A has been taken off the supports. The pressure at which this occurs is the upper-limit measurable pressure. Incident to evacuation

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S/058/62/000/004/004/160
A058/A101

Vibration manometer whose re.dings...

below the limit pr... bellows B is compressed and the disk connected with it is shifted, which induces tension in the vibrator and, as a result, a change in the frequency of its oscillations. In this way the magnitude of pressure can be judged from the oscillation amplitude of the vibrator. It was established that incident to frequency variation with an accuracy approaching cycles-per-second units, the manometer enables one to measure pressure in a range of two orders (e.g., from 1 to 10^{-2} mm Hg). The readings of the manometer do not depend on the type of gas, and the manometer is virtually insensitive to external mechanical influences.

N. Biryukova

[Abstracter's note: Complete translation]

Card 2/2

S/129/63/000/001/003/017
E073/E335

AUTHORS: Rotenshteyn, B.F., Muntyanu, A.P. and Shif, A.F.

TITLE: Compound ferromagnetics with high internal friction

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 1, 1963, 12 - 15

TEXT: A method of increasing the internal friction of non-ferromagnetic metals by depositing electrolytically a coating of a ferromagnetic (Ni or an Fe-Ni alloy) is described. Nickel-plating took place in a bath containing 140 g/l. $NiSO_4$, 20 g/l. $NiCl_2$ and 20 g/l. H_3BO_3, 30 g/l. ammonium sulphate or 4 g/l. dinaphthalene sulphonic acid (2.6-2.7) were added to the solution; hydrogen index 5.2, current density 1 A/cm^2. Plating with an Fe-Ni alloy was in a bath containing 21.8 g/l. $NiSO_4 \cdot 6H_2O$, 9.7 g/l. NaCl, 25 g/l. H_3BO_3, 0.83 g/l. saccharin, adding $FeSO_4 \cdot 7H_2O$ in the quantity required to obtain an alloy of the desired composition. The internal friction was measured by the torsion-pendulum method with a varying stress-amplitude up to 2.5 kg/mm^2, applying a DC

Card 1/3

Compound ferromagnetics ....

longitudinal magnetic field of up to 600 Oe. The specimens were heated to 220 °C after being fitted into the instrument and held for 1 h at that temperature. Results: 1) internal friction is almost independent of amplitude under conditions of saturation-magnetization (600 Oe); 2) there is a definite stress at which the internal friction is highest for each magnitude of the magnetic field; 3) there is an intensity of the longitudinal magnetic field, for each stress value, at which the internal friction will have the highest value and the magnitude of the magnetic field will be the lower the higher the stress-amplitude; 4) the value H_{max} at which the internal friction is highest for a given stress-amplitude depends on the properties of the metal in the core of the specimen; the internal friction of combined ferromagnetics depends to a great extent on the amplitude of the force; also, the dependence is more pronounced in the magnetized than in the demagnetized state. For commercial iron, Fe-Ni alloys with up to 50% Ni and for pure annealed Ni the internal friction in the Ni is highest for an amplitude between 1 and 2 kg/mm^2,

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Q^{-1} = 1910 x 10^{-5} for commercial iron and 1590 x 10^{-5} for nickel. A compound ferromagnetic with a layer of Fe-Ni alloy has an internal friction comparable with that of an Fe-Ni alloy; holding of such materials in vacuum at high temperatures appears to give them higher internal-friction values than those obtained in the here described work. There are 5 figures.

ASSOCIATION: Timishoarskiy politekhnicheskiy institut (Rumyniya)
(Timisoara Polytechnical Institute, Romania)

Card 3/3

ROTENSHTEYN, B.F.

Determination of internal stresses in ferromagnetic layers.
Zav.lab. no.11:1328-1330 '59. (MIRA 13:4)

1.Politekhnicheskiy institut v g.Timishoara, Rumynskaya Narodnaya Respublika.
(Iron--Magnetic properties) (Strains and stresses)

ROTENSHTEYN, B.F.; MUNTYANU, A.P.

Effect of heat treatment on internal friction in ferromagnetic layers. Metalloved. i term obr. met. no.7:15-16 Jl '60.
(MIRA 13:10)

1. Timosharskiy politekhnicheskiy institut, Rumyniya.
(Nickel plating) (Internal friction)

ROTENSHTEYN, B.F.

18.8100

~~28 (5), 18 (7)~~

66966

SOV/32-25-11-22/69

AUTHOR: Rotenstein, B. F.

TITLE: Determination of Internal Tensions in Ferromagnetic Layers

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 11, pp 1328 - 1330 (USSR)

ABSTRACT: Investigations of thin ferromagnetic layers are becoming increasingly important, since such layers are used extensively in radio-electronics. A method has been developed permitting the evaluation of the coercive force and tensions by the presence of maxima of the internal friction. The measure of the tension is the mobility of the border zones separating the neighboring areas of spontaneous magnetization (the so-called Blokh partitions). This mobility was determined according to the maximum of the internal friction, which was observed in ferromagnetic metals along the length of the alternating-current field (Refs 2-8). The tension of the magnetic field corresponding to the maximum of the internal friction is the coercive force (Ref 11). The dependence of the difference ΔQ^{-1} between the internal friction in the magnetic field of a given intensity and the internal friction in the demagnetized state is given for two samples (Figure). The samples used were of copper wire (diameter 1 mm)

Card 1/2

Determination of Internal Tensions in Ferromagnetic Layers SOV/32-25-11-22/69

with a nickel coating applied galvanically (thickness 50 μ). The measurements were made by means of a torsion pendulum at oscillation frequencies of 2 cycles per second and a frequency of the magnetic field of 50 cycles per second. The measure of the internal friction used was the value Q^{-1}, which is π times smaller than the decrement of logarithmic attenuation. Samples of three electrolytes of different compositions were tested, and it was found that the samples obtained from an electrolyte of the composition 100 g/l $NiSO_4$, 50 g/l $[NiSO_4 + (NH_4)_2SO_4 + 6H_2O]$, 10 g/l NaCl, 15 g/l H_3BO_3 at pH = 5 and D_k = 10 ma/cm^2 did not exhibit any maximum of the internal friction in the magnetic field. The internal tension of one of the samples was found to be lower than had been stated by Yu. M. Polukarov (Ref 12). There are 1 figure and 12 references, 1 of which is Soviet.

ASSOCIATION: Politekhnicheskiy institut v. g. Timishoara, Rumynskaya Narodnaya Respublika (Polytechnic Institute of the City of Timişoara, Rumanian People's Republic)

NEDESHAN, Sh.A.; ROTENSHTEYN, B.F.; KHOROVITS, B.A.; SAFTA, V.I.

Increasing fatigue resistance by electrolytic plating with an iron-nickel alloy. Metalloved. i term. obr. met. no.12: 37-40 D '62. (MIRA 16:1)

1. Timishorskiy politekhnicheskiy institut, Rumyniya.
(Steel--Fatigue) (Electroplating)

ROTENSHTEYN, B.F. [Rothenstein, B.F.]; MUNTYANU, A.P. [Munteanu, A.P.]; SHIF, A.F. [Sif, A.F.]

Complex ferromagnetic materials with strong internal friction. Metalloved. i term. obr. met. no.1:12-15 Ja '63. (MIRA 16:2)

1. Timishoarskiy politekhnicheskiy institut, Rumyniya.
(Ferromagnetism)
(Internal friction)

Rotenshteyn, B.F.

81819

S/129/60/000/07/003/013
E193/E235

182400

AUTHORS: Rotenshteyn, B. F., and Muntyanu, A. P.

TITLE: The Effect of Heat Treatment on the Internal Stresses in Ferromagnetic Layers

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No. 7, pp. 15-16

TEXT: It has been established by other workers (Ref. 1) that the fatigue strength of metals can be increased by coating them with another, electro-deposited metal, nickel being particularly suitable for this purpose owing to the low magnitude of internal stresses in electro-deposited layers of this metal. The object of the present investigation was to study the effect of heat treatment at 150 to 250°C on the magnitude of the internal stresses in layers of nickel and nickel-iron alloy of various thickness, electro-deposited on copper. To determine the internal stresses a method was used which is based on the magneto-mechanical effect of ferromagnetics, namely that in the case of magnitization in a longitudinal a.c. field there will be a maximum in the internal friction for a magnetic field of a certain value. The results indicate that the magnitude of the

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81819
S/129/60/000/07/003/013
E193/E235

The Effect of Heat Treatment on the Internal Stresses in Ferromagnetic Layers

internal stress present in electro-deposited ferromagnetic layers can be reduced by heating, the optimum temperature of the heat treatment depending on the plating conditions, thickness of the deposit, etc. The increase in the magnitude of internal stresses occurring at temperatures higher than the optimum temperature must be attributed to some physico-chemical processes, taking place during the heat-treatment, since this effect is not observed if the heat treatment is carried out in vacuum. The fact that the onset of the magneto-mechanical effect coincides with intensified evolution of hydrogen, indicates that hydrogen, present in electro-deposited layers, plays an important role in the studied phenomena. There are 3 figures and 5 references: 4 Soviet and 1 English.

ASSOCIATION: Timosharskiy politekhnicheskiy institut (Rumyniya)
(Timisoara Polytechnical Institute (Rumania))

4

Card 2/2

ROTENSHTEYN, S.M., inzh.

New machinery for winter operations. Stroi. truboprov. 5 no.9:24-26 S '60. (MIRA 13:9)
(Earthmoving machinery--Cold weather operations)
(Pipelines--Cold weather conditions)

ROTENSHTEYN, S.M.

ROTENSHTEYN, S.M., inzh.(Moskva); KHERSONSKIY, A.S., inzh. (Moskva)

New machines for pipeline construction. Stroi.pred.neft.prom. 2 no.7:1-4 Jl '57. (MIRA 10:10)
(Pipelines) (Petroleum industry--Equipment and supplies)

ROTENSTEIN, P.; DRAGAN, N.; STAICU,L.; HUBERT,H.

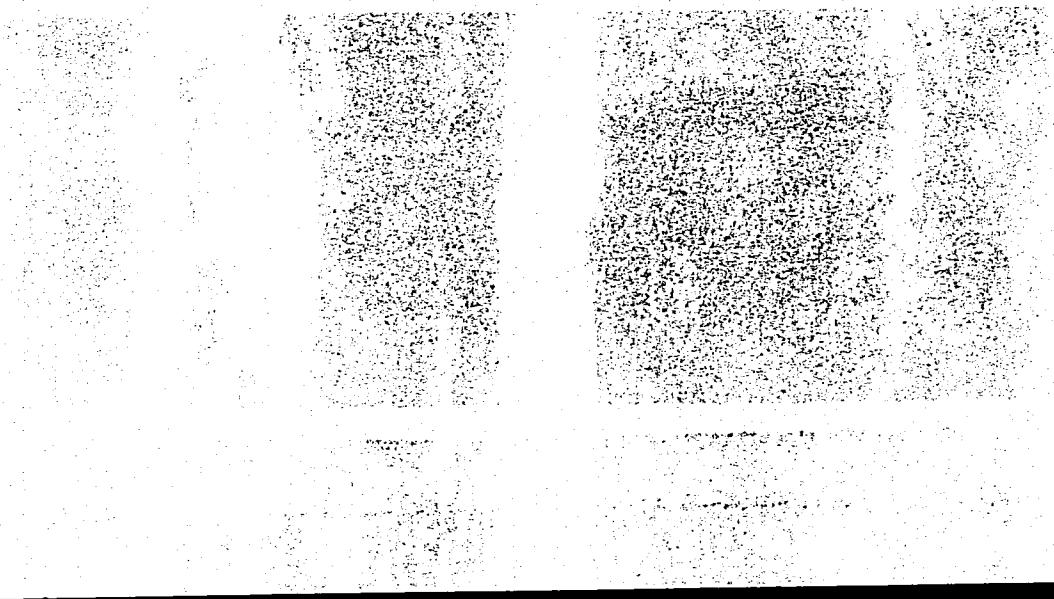
Influence of boron on the isothermal decomposition of austenite in the 10C10 steels. Studii cerc metalurgie 8 no.2:111-130 '63

ROTENSHTEYN, B.

Scientific Session of the Metallurgical Research Institute.
Rev Roum metalurg 8 no. 2:265-269 '63.

ROTENSTEIN, B.; DRAGAN, N.; STAICU, L.; HUBERT, H., IACOB, M.

Contributions to the study on the transformation of undercooled austenite of carbon steels. Rev Roum metallurg 9 no. 1:105-115 '64.



ROTENSTEIN, B.

RUMANIA/Solid State Physics - Mechanical Properties of Crystals and Poly-Crystalline Compounds E-9

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1100

Author : Rotenstein, B.
Inst : -
Title : Investigation of Properties of Low-Alloyed Structural Manganese-Molybdenum Steel.

Orig Pub : Studii si cercetari metalurgie, 1956, 1, No 2, 261-282

Abstract : An investigation was made of the influence of manganese, chromium, molybdenum, copper, and carbon on the properties and structure of manganese-molybdenum steel. The author establishes those steel compositions which are of interast for more complete analysis of its technological properties, and also the optimum parameters of heat treatment. The influence of the chemical composition and the heat-treatment conditions has been investigated by testing for empact viscosity, for hardness, and also by ...

Card 1/2

RUMANIA/ Solid State Physics - Mechanical Properties of Crystals and Poly-Crystalline Compounds E-9

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1100

microstructural analysis of forged specimens, after normalization, quenching, and tempering. A further investigation was made of the properties in tension, impact, temperatures below zero, hardenability, susceptibility to reversible temper brittleness, cold sttting, sensitivity to [illegible] thermal welding cycle, and corrosion stability. It was established that low-alloyed manganese-molybdenum steel with small additions of copper and silicon can be used to make machine parts as a substitute for chrome-nickel steels or chrome-molybdenum steels, and also for structural and ship-building material.

Card 2/2

ROTENSHTEYN, B. [Rotenstei-, B.]; DREGAN, N. [Dragan, N.];
STAYKU, L. [Staicu, L.]; KHUBERT, Kh.[Hubert, H.]

Influence of boron on the isothermic decomposition of austenite in the 40C10 steel. Rev Roum metallurg 9 no. 1: 87-104 '64.

L 55166-65 EWT(m)/EWA(d)/I/EWP(t)/EWP(z)/EWP(b)/EWA(d) MJW/JD

ACCESSION NR: AP5017641 RU/0017/64/000/009/0387/0391

AUTHOR: Rotenstein, B. (Engineer, Candidate of technical sciences) 20 B

TITLE: Study on the transformation of austenite into 41 C 10 steel by continuous cooling

SOURCE: Metalurgia, no. 9, 1964, 387-391

TOPIC TAGS: steel, austenitic steel, metal hardening

ABSTRACT: (Author's English summary modified): The author presents the austenite transformation curve resulting on steady cooling of steel 41-C-10 after austenitization at 850 degrees centigrade. This curve may be used to determine the minimum cooling speeds required for hardening to martensite (22 degrees centigrade per second) and to start ferrite formation (75 degrees centigrade per second). Orig. art. has 10 figures, 2 tables, 2 graphs.

ASSOCIATION: Institutul de cercetari metalurgice (Metallurgical Research Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 008 JPRS

Card 1/1

ROTENSTEIN, B.; DRAGAN,N.; STAICU,L.; HUBERT,H.; IACOB,M.

Contributions to the study of transformation of undercooled austenite into carbon steel. Studii cerc metalurgie 8 no.4: 375-389 '63.

ACC NR: AP6001116 SOURCE CODE: RU/0020/65/010/002/0261/0264

AUTHOR: Rotenstein, B.

ORG: none

TITLE: The fifth symposium of the Rumanian Metallurgical Research Institute

SOURCE: Revue Roumanie des sciences techniques. Serie de metallurgie, v. 10, no. 2, 1965, 261-264

TOPIC TAGS: metallurgic conference, metallurgic research, electroslag melting, stainless steel clad tube, STEEL STRUCTURE, METAL TUBE

ABSTRACT: The Fifth Symposium of the Metallurgical Research Institute was held 17-19 January 1965 in Bucharest. I. Tripsa, Director of the Institute, in his opening statement, reviewed achievements in metallurgical research in Rumania. I. Tripsa and M. Cortescu reported on some theoretical aspects of electroslag melting and on experience with electroslag melting of high-quality steels in an experimental furnace equipped with molds 60—120 mm in diameter. S. Baicu and H. Hubert presented a paper on structural changes in heat-reistant 12% chromium steel brought about by annealing at 200—750C. V. Nedelcovici and H. Hubert discussed heat treatment of chromium-manganese-nickel-nitrogen stainless steel and specified the conditions which ensure a homogeneous structure and satisfactory corrosion resistance. O. Cuida,

Card 1/2

ACC NR: AP5001116

I. Frantiu, N. Creavu, V. Petrescu and Gh. Avram described the manufacture of stainless steel-clad carbon-steel tubes from composite shells obtained by electroslag melting.

SUB CODE: 13, 11/ SUBM DATE: none

Card 2/2

RUMANIA

ROTENSTEIN, B.; DRAGAN, N.; STACIU, L.; HUBERT, H.

(None)

Bucharest, Studii si Cercetari de Metalurgie, No 2, 1963, pp 111-130

"The Influence of Boron On the Isothermal Decomposition of Austenite In 40C10 Steel."

(4)

Distr: 4E2c

Isothermal decomposition of austenite in the steel Arc 3. B. Rotenstein and N. Drăgan. *Acad. rep. populare Romîne, Studii cercetări met.* 4, 493–510(1959).—The isothermal decompn. of austenite in the Arc 3 (Romanian standard STAS 795–49, contg. C 0.65, Mn 1.50, and Si 1.38%) steel has been studied. Specimens 30 × 3 mm. were homogenized *in vacuo* at 1150° for 10 hrs. The kinetics of the isothermal decompn. (675–250°, in 25° intervals) were detd. by means of a thermomagnetic method (with an Akoulov-type anisometer, enabling study of transformations within a magnetic field of 3000–3500 oe.), controlling its results by means of a microscopic method, on disks 2 mm. thick. The austenitization of the magnetic specimens was performed at 830 ± 7°; that of the microscope samples, at the same temp. and at 1000 ± 10°. The results indicate that in the pearlitic interval the transformation kinetics present the particularities of the isothermal reaction, usual at these temps., while in the intermediate interval 2 distinct domains of the transformation appear: (*a*) the superior domain, where the transformation brings about the formation of superior bainite and pearlite (which formation dets. almost complete exhaustion of the supercooled austenite); the kinetic curves (for 450–350°) contain 2 bends, corresponding to the formation reactions of these constituents, and (*b*) the inferior domain, where the austenite decompn. brings about formation of inferior bainite. A crit. point on the start of the transformation curve, around 340°, which indicates increased stability of the supercooled austenite transformation in this temp. zone, has been demonstrated. Corresponding to this point, there exists a temp. zone (325–350°) where the transformation, even at long maintenance, does not affect more than 60% of the initial vol. of austenite. The diagrams of the isothermal decompn. of austenite in the Arc 3 steel were drawn in the temp. range Ar_1 (675°) to M_s (225°). 28 references.

M. Ben-Eliezer

4

1-mfc(j10)

ROTENSTEIN, B

Distr: 4E2c

Low-alloy manganese-molybdenum structural steel. B. Rotenstein. *Acad. rep. populare Romîne, Studii cercetări met.* 1, 281–82(1956).—Low-alloy Mn–Mo steels with small amts. of Cu and Si were usable for machine parts, and as substitutes for Cr–Ni or Cr–Mo steels as material for ship construction. 21 references. From *C.Z.* 1958, 6056.

Henry M. Kochler

Susceptibility of superheated steel to reversible temper brittleness as a function of the conditions of thermal treatment after secondary austenitization. Butu Rotenstein and Nicolae Drăgan. *Acad. rep. populare Romîne, Studii cercetări. met.* 4, 127-38(1959).—Specimens of a C 0.25, Si 1.07, Mn 1.17, and Cr 1.33% steel were held at 1200° for 1 hr., then quenched. The specimens were then quenched from 850, 900, 950, and 1000°. Tempering was done at 500, 600, and 700° for 1 hr. with final cooling in water and in the furnace. The susceptibility of superheated steel depends on the subsequent heat-treatment. Secondary heating at temps. around the Chernov *b* point leads to an attenuation of the susceptibility, independent of the temp. at which tempering takes place. After tempering at high (700°) temp. the steel is very sensitive to reversible temper brittleness; after a tempering at 500°, this sensitivity is much lower. Felicitas D. Goodman

Rotenstein, B.; Dragan, N.

Steel inclination toward reversible tempering brittleness dependent on the temperature of repeated austenitization. In Russian. p. 5.

REVUE DE METALLURGIE. JOURNAL OF METALURGY. (Academia Republicii Populare Romine) Bucuresti, Rumania Vol. 3, no. 3, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, Sept 1959

Uncl.

ROTENSTEIN, D.

Distr: 4E2c

The $\gamma \rightarrow \alpha$ transformation without diffusion in Fe-C alloys. Butu Rotenstein, Sofia Caloghiru, and Teodor Teitel. *Rev. mét., Acad. rép. populaire Roumaine* 3, 99–108 (1958)(in English).—The influence of the holding time, in the period of relative stability, of the phase upon the kinetics of transformation at >0° without diffusion of the α phase was deducted from measurements of the magnetizing intensity of an alloy contg. 0.9% C and 1.7–1.8% Cr. The test specimens were heated for 4 min. at 1000° and placed in an oven kept at various temps., or were kept at 500–200° for 2 min. and then placed in the oven. Irrespective of the temp. of the specimen, transformation initially proceeds at a high rate, which later decreases. Results show that processes which take place in the zone of high temps. (Ar′) affect the transformation without diffusion of the γ phase, causing the amt. of α phase subsequently formed to grow as the temp. decreases. After 20 min. the amts. of α phase, formed at temps. between 120° and 27°, are generally smaller than those obtained if the specimen passes directly from the range of stability of the γ phase to the range of temp. at which the $\gamma \rightarrow \alpha$ transformation takes place. The temp. variation at 400–200° does not indicate any specific effect of the period of relative stability of the γ phase. However, phenomena exist in this period which affect the formation without diffusion of the α phase. This period is, therefore, an incubation period. The formed amts. of α phase are very close to each other during sudden variation of the temp. from 1000° to 27° and from 200° to 27°. The variation of the amt. of α phase formed without diffusion cannot be derived as a function of cooling rate of the specimen at 1000 to 200°. The amt. of the α phase isothermally formed has a max. when transformation takes place at 90° and is a function of temp. Both the total amts. of α phase and the amts. isothermally formed are generally smaller than the amts. obtained by a sudden cooling. At Ar′ (500 to 450°) the effect of the period of incubation of the γ phase is marked by the increase of the amt. of α phase isothermally formed at 90–120°. At Ar″ (450 to 200°) the period of incubation bears no effect whatsoever. The factor which dets. the transformation is the temp. at which transformation without diffusion takes place and not the tensions caused in the specimen by sudden cooling. The app. devised measures the magnetic flux of the induction field by a ballistic method. A ballistic galvanometer of a sensibility of 4×10^{-9} C/mm. is employed. The specimens were homogenized prior to testing by annealing at 1150° *in vacuo* for 9–10 hrs., pickled, and Cr plated.

Mordecai Medwied

ROMANIA

ROTENSTEIN, B.; DRAGAN, N.; STAICU, L.; HUBERT, E.; IACOB, M.

Bucharest, Studii si Cercetari de Metalurgie, No 4, 1963, pp 375-390

"Contributions to the Study of the Transformation of Austenite in Carbon Steels."

(5)

ROTENSTEIN, B.; STAICU, L.

Structural changes in the isothermal transformation of austenite in a Cr-Si-Mo steel with 5% Cr. Studii cerc metalurgie 9 no.2:147-159 '64.

[illegible]

[illegible] ring in [illegible] transformation of [illegible] steel [illegible] Cr. Rev [illegible] metallurgie 9 [illegible]

ROTENSTEIN, B.

Distr: 4E2c

Recrystallization of Austenite in Overheated Steel. B. Rotenstein and N. Drágan. Acad. rep. populare Romîne, Studii cercetari met. 4, 295-310(1959); cf. Sadowsky, C. A. 52, 1024f, 17041d; Sazonov, C. A. 52, 1020h; Rauzin, C. A. 52, 9910h.--The recrystn. of austenite in strongly overheated 0.45% C and slightly alloyed (Mn, Mo, Cr) steels and the influence of some heat-treatment parameters on this phenomenon were examd. The four heat-treatments involved primary austenitization followed by oil quenching, and secondary austenitization followed by oil quenching: (a) 1200°, 3 hrs.; 840°, 900-1150° (50° intervals), 30 min.; (b) 1300°, 3 hrs.; 900-1250° (50° intervals), 30 min.; (c) 1300°, 3 hrs.; 840°, 900°, 950°, 1000°, 1050°, 2 hrs.; (d) 1300°, 3 hrs.; 840°, 900°, 950°, 1000°, 1050°, 4 hrs. In all cases the steels were reheated to 550° for 20 hrs. after the 2nd hardening and cooled in the furnace. The recrystn. of austenite took place at 900-950°, with heating rates of 150-200°/min. The recrystd. austenite has fine granulation within a large interval of temp., approx. 900-1050°. Raising the temp. of the 1st heating from 1200 to 1300° detd. the displacement of the interval with fine granulation of the austenite, to higher temps., from 950-1000° to 1000-1100°. Lengthening the time of the 2nd heating lowers the temp. interval at which the overheated austenite recrystallizers. No relation was found between the modification of the austenite granulation as a function of the ordinary heating temp. or the temp. of heating of the overheated steel before the 2nd hardening. The structure of steels STAS 792-40 (20MoC12, 33MoC11, 41MoC11) and the marks 40MC11 and OLC45, overheated by hardening at 1200-1300° can be regenerated by a 2nd hardening at 900-100°. M. Ben Elieser

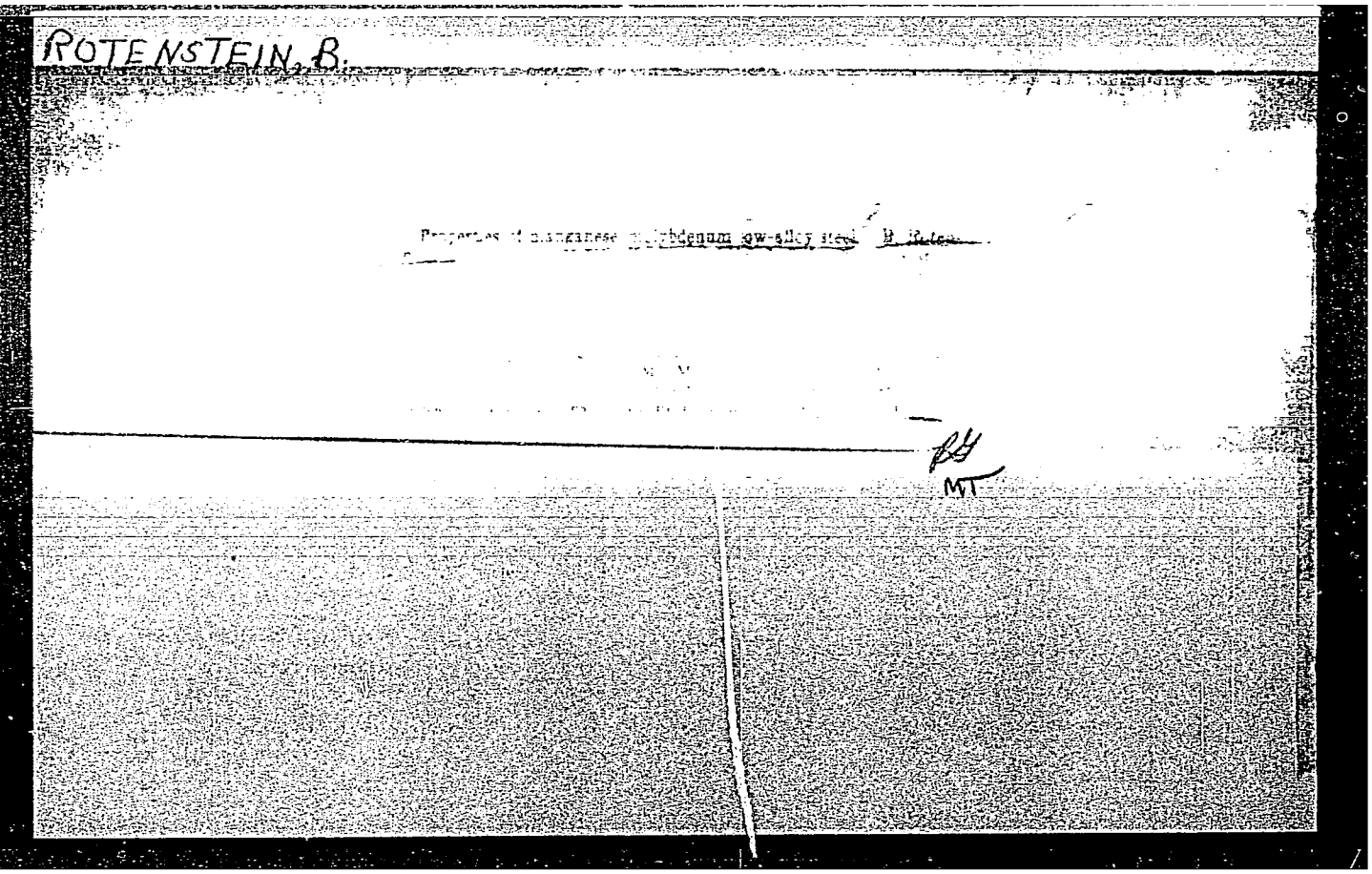
(Retyped clipped abstract)
Card 1/1 jiaps

ROTENSTEIN, P.; DRAGAN, N.

Susceptibility of sturctural steel alloyed with manganese to the reversible brittleness of tempering, according to the conditions of the heat treatment. In French. p. 29

REVUE ROUMAINE DE METALLURGIE, RUMANIAN JOURNAL OF METTALLURGY. (Academia Republicii Populare Romine) Bucuresti, Romainia. Vol. 4, No. 1, 1959

Monthly List of East European Accessions (EEAI) LC Vol. 9, no. 2, Jan 1960 Uncl.



The tendency of steel to show reversible tempering brittleness (as a function of the temperature of repeated austenitization. Butu Rotenstein and Nicolae Drăgan. *Acad. rep. populare Romîne, Studii cercetări met.* 3, 259–85 (1958).—If steel is 1st tempered at too high a temp., the austenite will recrystallize in the shape of a very special modification, the grain size of which depends upon the temp. of austenization before the 2nd tempering. Some of the processes which impart to steel reversible tempering brittleness take place at temps. above Ac_1; they occur along the grain boundaries of austenite, which had been formed during earlier heating. If the change of the austenite grains affects the reversible tempering brittleness of steels, then any change of the austenite grains due to the recrystn. of the solid soln., which is stable at higher temps., must affect the same type of brittleness in, e.g., construction steels. This was examd. in a construction steel with a medium C content, which was alloyed with Cr, Mn, and Si; the samples were tempered at 1200° and then between 850 and 975°, i.e., at the recrystn. temp. of austenite. After tempering, the samples were annealed at 700° for 1 hr., quenched in H_2O, and then treated by sensitizing tempering at 520, 560, and 600° and allowed to cool in the furnace. The samples used for comparison were simply tempered at 850°, annealed at 700°, and quenched in H_2O. The change of sensitivity to reversible tempering brittleness was studied as a function of the transition temp. The surfaces of the broken pieces were examd., if they looked fibrous or mixed, and it was noted at which temps. the pieces broke (above or below 0°) by aid of thermocouples which were soldered to the samples. It can be concluded from the expts. that for the steel under investigation the recrystn. point of austenite lies between 950 and 1000°, the austenite was originally superheated; that the secondary austenization at the recrystn. temp. dets. a drop of the transition point, where the surface at breaking changes from the fibrous aspect to the mixed one, in the steel which can show this reversible tempering brittleness; that the processes which det. the state of brittleness of the steel, which occur at a high temp. in the region of austenite, have a neg. influence which concerns the effects of the increase of the grain size upon the resistance which the steel shows against breaking due to brittleness. 22 references. Werner Jacobsen

Distr: 4E2c

ROTENSTEIN,B.; CALCGHIRU,S.; TEITEL,T.

ROTENSTEIN,B.; CALCGHIRU,S.; TEITEL,T. Contributions to the study of the transformation without diffusion r-ain the alloys Fe-C. p. 237.

Vol. 8, no. 1, Jan./Mar. 1956
BULETIN STIINTIFIC.
SCIENCE
RUMANIA

So: East European Accession, Vol. 6, No.5, May 1957

Rotenstein, Botu

12 18 3

The diffusionless $\gamma \rightarrow \alpha$ transformation in Fe-C alloys. Butu Rotenstein, Sofia Caloghiuri, and Teodor Teitel. *Academia Republicii Populare Romîne, Bul. ştiinţ. Sect. ştiinţe mat fiz.* 8, No. 1, 237–46(1956).—The object of this work was to obtain new information about the period of relative stability of the γ-phase in Fe-C alloys. An incubation period was found to be present during the subcooling of the γ phase; the processes occurring during this interval influenced the kinetics of the ultimate transition into the α phase. The alloy studied contained C 0.9, Cr 1.7–1.8%, and cylindrical test specimens were machined into 2 mm. × 25 mm. bars from forged steel bars. The relative phase compns. were detd. by measuring the magnetic permeability of the test specimens in the field of an induction coil. The samples were placed in a small furnace which was inside the induction coil. The samples were first heated for 4 min. at 1000° to produce the γ phase, then subjected to an incubation period of 2 min. at temps. between 200 and 500° and finally maintained at const. temps. of 27 to 120°. In general, the total as well as the isothermally formed amounts of α phase material were smaller than those formed during rapid quenching. For incubation periods at 450–500° a lowering of the temp. caused a decrease in the amount of α phase material formed subsequently. A similar correlation was not apparent for incubation temps. of 200 to 400°. The temperature at which the final phase transformation occurs, rather than the internal stresses caused by sudden temp. changes, was found to be the detg. factor. The results of this study did not support a previously advanced hypothesis according to which internal stresses were considered to be the major factor in the diffusionless $\gamma \rightarrow \alpha$ phase transition. 22 references.

Alfred Schneider

18.8100
~~28 (5), 18 (7)~~

66966
SOV/32-25-11-22/69

AUTHOR: Rotenstein, B. F.

TITLE: Determination of Internal Tensions in Ferromagnetic Layers

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 11, pp 1328 - 1330 (USSR)

ABSTRACT: Investigations of thin ferromagnetic layers are becoming increasingly important, since such layers are used extensively in radio-electronics. A method has been developed permitting the evaluation of the coercive force and tensions by the presence of maxima of the internal friction. The measure of the tension is the mobility of the border zones separating the neighboring areas of spontaneous magnetization (the so-called Blokh partitions). This mobility was determined according to the maximum of the internal friction, which was observed in ferromagnetic metals along the length of the alternating-current field (Refs 2-8). The tension of the magnetic field corresponding to the maximum of the internal friction is the coercive force (Ref 11). The dependence of the difference ΔQ^{-1} between the internal friction in the magnetic field of a given intensity and the internal friction in the demagnetized state is given for two samples (Figure). The samples used were of copper wire (diameter 1 mm)

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Determination of Internal Tensions in Ferromagnetic Layers SOV/32-25-11-22/69

with a nickel coating applied galvanically (thickness 50 μ). The measurements were made by means of a torsion pendulum at oscillation frequencies of 2 cycles per second and a frequency of the magnetic field of 50 cycles per second. The measure of the internal friction used was the value Q^{-1}, which is π times smaller than the decrement of logarithmic attenuation. Samples of three electrolytes of different compositions were tested, and it was found that the samples obtained from an electrolyte of the composition 100 g/l $NiSO_4$, 50 g/l $[NiSO_4 + (NH_4)_2SO_4 + 6H_2O]$, 10 g/l NaCl, 15 g/l H_3BO_3 at pH = 5 and D_k = 10 ma/cm^2 did not exhibit any maximum of the internal friction in the magnetic field. The internal tension of one of the samples was found to be lower than had been stated by Yu. M. Polukarov (Ref 12). There are 1 figure and 12 references, 1 of which is Soviet.

ASSOCIATION: Politekhnicheskiy institut v. g. Timishoara, Rumynskaya Narodnaya Respublika (Polytechnic Institute of the City of Timişoara, Rumanian People's Republic)

S/129/62/000/012/008/013
E073/E351

AUTHORS: Nedeshan, Sh.A., Rotenshteyn, B.F., Khorovits, B.A. and Safta, V.I.

TITLE: Increasing the fatigue strength by plating with an iron-nickel alloy

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1962, 37 - 40

TEXT: The influence of plating the steels 45 and 60 with an Fe-Ni alloy and the influence of the thickness of the layer (25, 50 and 100 μ) on the fatigue strength were investigated. Conclusions: Ni-Fe layers deposited by plating with a low bath voltage improves the fatigue strength of the base material; the fatigue strength depends hardly at all on the thickness of the deposited layer; this is attributed to the lower internal stresses in layers deposited by plating. There are 4 figures and 1 table.

ASSOCIATION: Timishorskiy politekhnicheskiy institut, Rumyniya (Timişoara Polytechnical Institute, Rumania)

Card 1/1

NISENBAUM, I.Ya.; URMAN, V.O.; KHAREVICH, M.I.; ROTER, N.A.; TOLOCHKO, V.V., red.; MATSKEVICH, L.P., red.; ALEKSEYEV, A.N., red.

[Minsk; concise address-handbook as of October 1, 1959] Minsk; kratkaia adresno-spravochnaia kniga. Po sostoianiiu na 1 oktiabria 1959 g. Minsk, 1960. 247 p. (MIRA 13:3)

1. Minskaya gorodskaya spravochno-informatsionnaya kontora "Mingor-spravka."

(Minsk--Directories)

ROTER, P.

Notes onthe mammal fauna of the Palestinian coastal region and surrounding areas. p. 487, (GLASNIK, No. 5/6, 1953, Belgrade, Yugoslavia)

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 1 Jan. 1955, Uncl.

ROTER, W.

Geodetic application of a Riemannian variety on recurrent space. Bul Ac Pol mat 9 no.3:147-149 '61.

1. Institut Mathematique, Section de Wroclaw, Academie Polonaise des Sciences. Presented by E. Marczewski.

ROTER, W.

A note on second order recurrent spaces. Bul Ac Pol math 12 no.10:621-626 '64.

1. Mathematical Institute of Wroclaw University. Submitted August 15, 1964.

ROTER, W.

Some remarks on recurrent and Ricci-recurrent spaces. Bul Ac Pol mat 10 no.10:533-536 '62.

1. Instytut Matematyczny, Oddzial Wroclaw, Polska Akademia Nauk. Presented by E.Marczewski.

ROTER, W.

On geodesical application of a Riemann variation on recurrent space. Bul Ac Pol mat 9 no.3:147-149 '61.

1. Institut Mathematique, (Section de Wroclaw), Academie Polonaise des Sciences. Presented by E. Marczewski.

(Geodesy) (Riemann surfaces) (Variations)

ROTHER, W.

Some remarks on recurrent spaces. Bul Ac Pol mat 12 no.4:277-283 '64.

1. Institute of Mathematics, Polish Academy of Sciences, Wroclaw Branch. Presented by H. Marczewski.

ROTERMEL', Bruno Pavlovich; MYKOV, Aleksandr Pavlovich; MAKAROV, [illegible], red.

[Maintenance of tractors and combines] Tekhnicheskii ukhod za traktorami i kombainami. Omsk, Omskoe knizhnoe izd-vo 1963. 120 p. (MIRA 17:8)

ROTERMEL', Bruno Pavlovich; IVANOV, Dmitriy Ivanovich; MAKHROV, M.K., red.; PLAKHTIYENKO, T.I., red.; DEYEV, P.G., tekhn. red.

[Electrical equipment of tractors and combine harvesters; their installation, operation, maintenance and repair] Elektrooborudovanie traktorov i kombainov; ustroistvo, ekspluatatsiia, tekhnicheskii ukhod, neispravnosti i ikh ustranenie. Omsk, Omskoe knizhnoe izd-vo, 1962. 148 p. (MIRA 16:4)

1. Omskiy sel'skokhozyaystvennyy institut im.S.M.Kirova (for Rotermel', Ivanov).
(Harvesting machinery--Electric equipment)
(Tractors--Electric equipment)

ROTERMEL', E. F.

20111 ROTERMEL', E. F. Zadachi meditsinskoy rentlenologii V bor'be dov Vrechev.-san slukhby khazansk, zh.d., vyp. 2, 1948, s. 36-42.

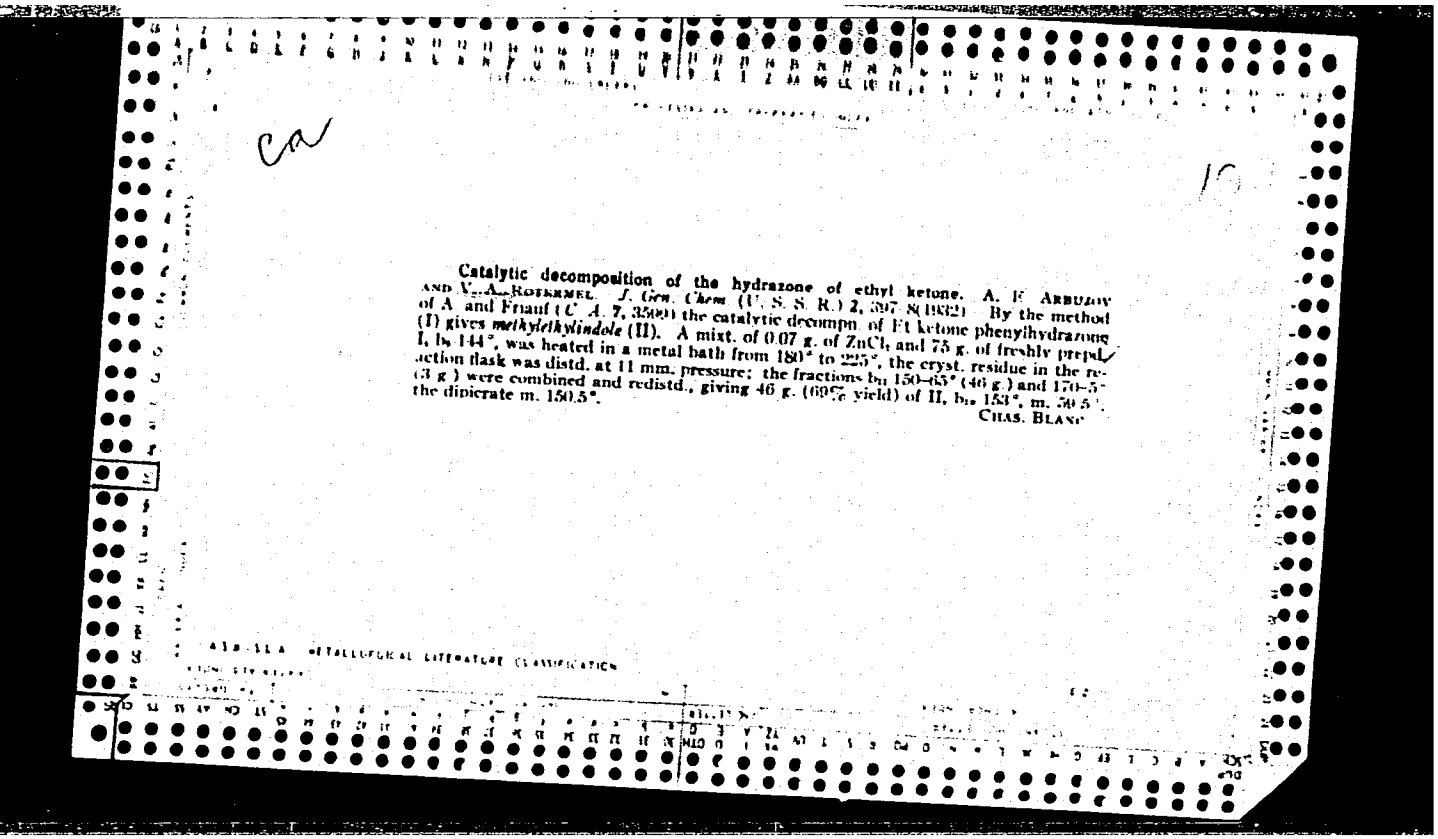
SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

ROTERMEL' P.F.

DANILOVICH, B.A.; ROTERMEL', P.F. v rabote prinimali uchastiye Ye.I.Konstantinova (Stalinskiy rayon), M.V.Gol'dman (Kiyevskiy rayon), Z.A.Fil'kenberg (Leninskiy rayon), O.N.Panyushenko (Pervomayskiy rayon), Ye.P. Nefedova (Moskvoretskiy rayon).

Hygienic characteristic of Moscow dormitories; according to data from saniary surveys made in 1951 - 1956. Gig. i san. 23 no.2: 69-71 F '58. (MIRA 11:4)

(MOSCOW--DORMITORIES--HYGIENIC ASPECTS)



Catalytic decomposition of the hydrazone of ethyl ketone. A. F. Arbuzov and V. A. Rotkemel. *J. Gen. Chem.* (U. S. S. R.) 2, 597-8(1932). By the method of A. and Fnauf (*C. A.* 7, 3580) the catalytic decompn. of Et ketone phenylhydrazone (I) gives *methylethylindole* (II). A mixt. of 0.07 g. of $ZnCl_2$ and 75 g. of freshly prepd. I, b. 144°, was heated in a metal bath from 180° to 225°, the cryst. residue in the reaction flask was distd. at 11 mm. pressure; the fractions b_{11} 150–65° (46 g.) and 170–5° (3 g.) were combined and redistd., giving 46 g. (69% yield) of II, b_{11} 151°, m. 50.5°; the dipicrate m. 150.5°.

Chas. Blanc

ROTERMEL', Yu.V., kapitan 3-go ranga

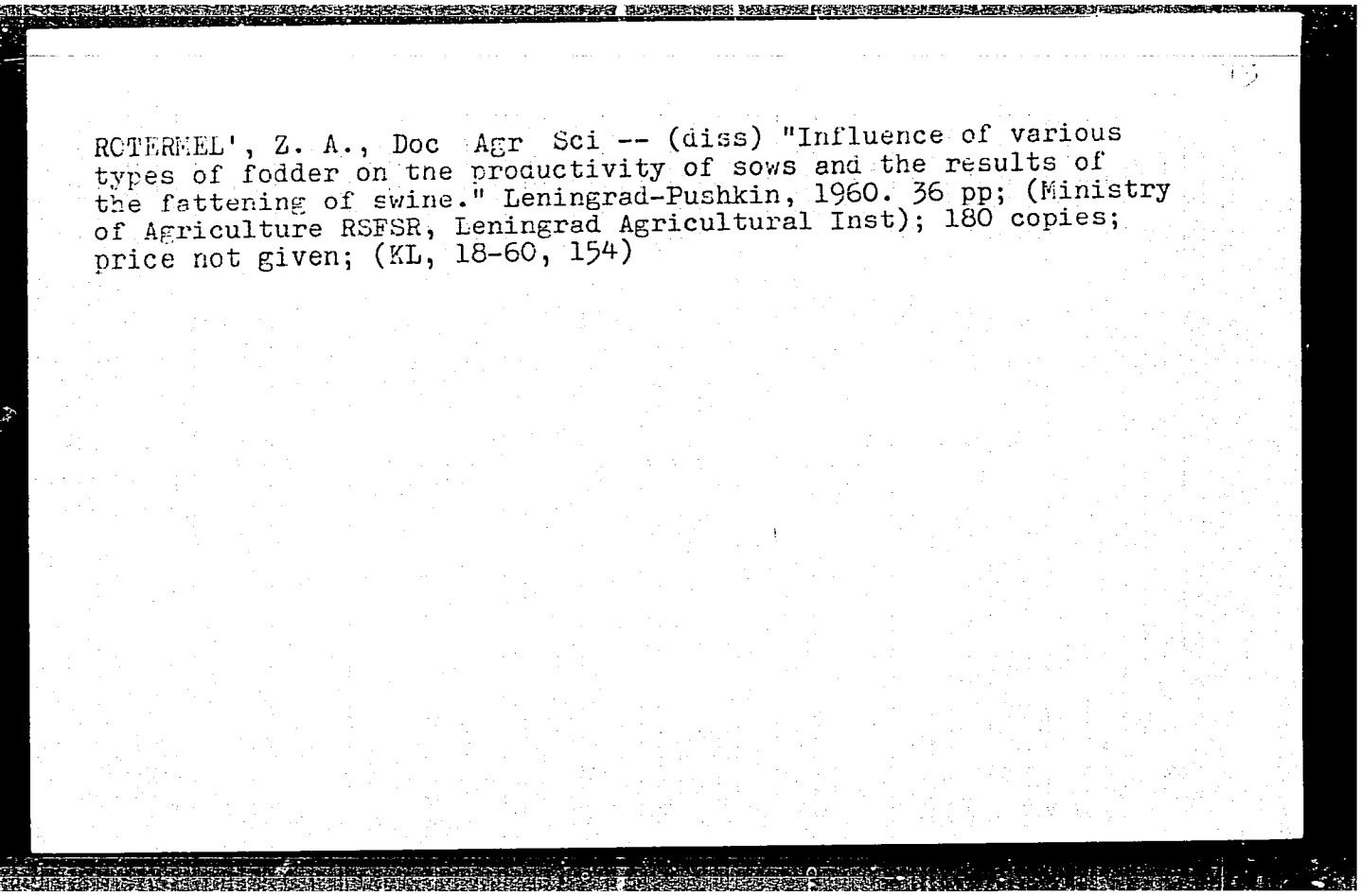
Save and correctly distribute the time allotted to the training of young officers. Mor. sbor. 47 no.12:40-45 D '63. (MIRA 18:12)

ROTERMEL', Yu.V., kapitan 3-go ranga

Planning the working out of course problems on a submarine. Mor. sbor. 47 no.6;61-63 Je '64. (MIRA 18:7)

ROTERMEL', Z.A.

[Work practice of the pig tender Anna Ivanovna Mikheeva; "Put' Lenina" collective farm of Vysokogorskii District, Tatar Republic]
Opyt raboty svinarki Anny Ivanovny Mikheevoi; kolkhoz "Put' Lenina" Vysokogorskogo raiona TASSR. Kazan', Tatkigoizdat, 1956. 14 p.
(Tatar ASSR--Swine) (MLRA 9:10)



ROTERMEL', Z. A., Doc Agr Sci -- (diss) "Influence of various types of fodder on the productivity of sows and the results of the fattening of swine." Leningrad-Pushkin, 1960. 36 pp; (Ministry of Agriculture RSFSR, Leningrad Agricultural Inst); 180 copies; price not given; (KL, 18-60, 154)

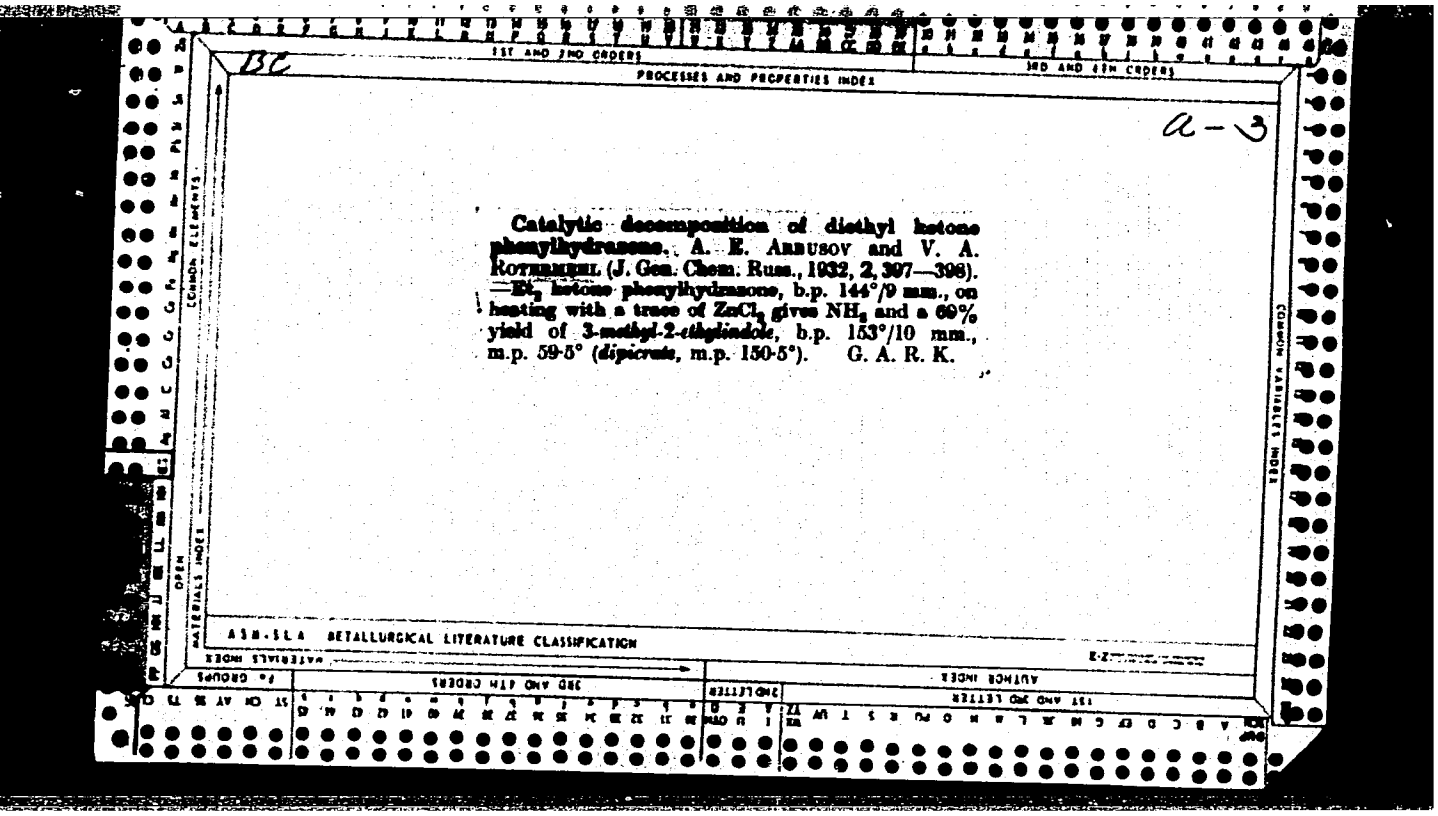
1. ROTERMEL',Z.A.

2. USSR (600)

4. SWINE

7. INFLUENCE OF CONTROLLED RAISING OF PIGS ON SUBSEQUENT FATTENING. SOV.zootekh. 7 no. 12 1952

9. Monthly List of Russian Accessions, Library of Congress, February, 1953, Unclassified.



Catalytic decomposition of diethyl ketone phenylhydrazone. A. E. ARBUSOV and V. A. ROTHERMEL (J. Gen. Chem. Russ., 1932, 2, 307—398). —Et_2 ketone phenylhydrazone, b.p. 144°/9 mm., on heating with a trace of $ZnCl_2$ gives NH_3 and a 60% yield of *3-methyl-2-ethylindole*, b.p. 153°/10 mm., m.p. 59·5° (*dipicrate*, m.p. 150·5°). G. A. R. K.

ROTERS, B. V.

ROTERS, B. V. "Two New Fungi from the North Dvina District," Zashchita Rastenii ot Vreditelei, vol. 7, no. 1-3, 1930, p. 165. 421 D36

SO: SIRA SI 90-53, 15 Dec. 1953

KURDYUMOV, A.V.; ROTERSHTEYN, A.A.

Possibility of reducing the loss of cadmium in the production of cadmium bronze. Izv. vys. ucheb. zav.; tsvet. met. 3 no.5:132-136 '60. (MIRA 13:11)

1. Krasnoyarskiy institut tsvetnykh metallov. Kafedra liteynogo proizvodstva.
(Copper-cadmium alloys—Metallurgy)

KURDYUMOV, A.V.; ROTERSHTEYN, A.A.

Reducing the loss of cadmium in the manufacture of cadmium bronze. Lit.proizv. no.7:44-45 Jl '61. (MIRA 14:7)
(Cadmium) (Bronze)

ROTERSHTEYN, S.M., dotsent

Clinical aspects of syphilitic aortitis. Vest.derm. i ven. 31 no.1: 32-37 Ja-F '57. (MLRA 10:7)

1. Iz Moskovskoy klinicheskoy kozhno-venerologicheskoy bol'nitsy imeni Korolenko (glavnyy vrach - zasluzhennyy vrach RSFSR. V.P. Nikolayev)

(SYPHILIS, CARDIOVASCULAR, diag.
aortitis)

ROTERT, P.P.

IVANOV, I.T., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor; ANTONOV, K.K., redaktor; VOLZHENSKIY, A.V., redaktor; GORNOV, V.N., redaktor; KUZNETSOV, G.F., redaktor; PEVZNER, I.V., inzhener, redaktor; ROTERT, P.P.; FRIDBERG, G.V., redaktor; PECHKOVSKAYA, T.V., tekhnicheskiy redaktor

[Skyscraper designs; experience in design and construction] Konstruktsii vysotnykh zdanii; iz opyta proektirovaniia i vozvedeniia. Red. kollegiia I.T.Ivanov, K.K.Antonov, A.V.Volzhenskii i dr. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1952. 103 p. [Microfilm] (MLRA 7:10)

1. Chlen-korrespondent Akademii arkhitektury SSSR (for Antonov, Volzhenskiy, Gornov, Kuznetsov, Roterт) 2. Akademiya arkhitektury SSSR, Moscow. Institut stroitel'noy tekhniki.
(Skyscrapers)
(Architecture--Designs and plans)

BONCIU, C.; DUMITRESCO, R.; PETROVICI, Monica; ROTESCO, C.

Experimental research on the toxicity of atabrine. Arch. roum. path. exp. microbiol. 21 no.1:213-233 Mr '62.

1. Travail de l'Institut "Dr. I. Cantacuzino" -- Service d'Anatomie Pathologique et de la Chaire de Medecine Judiciaire de l'Institut Medico-Pharmaceutique de Bucarest.
(QUINACRINE)

GODNEV, T.N. [Hodneu, TS.M.], akademik; ROTFARB, R.M.; AKULOVICH, N.K.

End reactions in the biosynthesis of chlorophyll and conditions of their progress. Vestsi AN BssR.Ser.biial.nav. no.2:5-8 '62. (MIRA 15:8)

1. AN Belorusskoy SSR.

(CHLORPHYLL)

GODNEV, T.N.; AKULOVICH, N.K.; ROTFARB, R.M. (Minsk)

Complete synthesis of chlorophyll and its biosynthesis. Usp. sovr. biol. 55 no.2:204-218 '63. (MIRA 17:8)

GODNEV, T.N., akademik; ROTFARB, R.M.

Relationship of the biosynthesis of phytol and carotinoids.
Dokl. AN SSSR 153 no.3:718-720 N '63. (MIRA 17:1)

1. Institut biologii AN BSSR. 2. AN BSSR (for Godnev).

SHLYK, A.A.; GODNEV, T.N.; ROTFARB, R.M.; LYAKHNOVICH, Ya.P.

Interrelationship of the biosynthesis of chlorophyll a and chlorophyll b in the restoration process. Biul. Inst. biol. AN BSSR no.2:59-64 '57. (MIRA 11:2)

(Chlorophyll)

SHLYK, A.A.; GODNEV, T.N.; LYAKHNOVICH, Ya.P.; ROTFARB, R.M.; YUNEVICH, V.I.

Studying the restoration of chlorophyll components during its accumulation. Biul. Inst. biol. AN BSSR no.2:65-71 '57. (MIRA 11:2)
(Chlorophyll)

USSR/Plant Physiology. Photosynthesis I

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58178

Author : Shlyk A. A., Godnev T. N., Lyakhnovich Ya. P., Rotfarb R. M., Yunevich V. I.

Inst : Institute of Biology, Academy of Sciences Belorussian SSR

Title : A Study of the Restoration of Components of Chlorophyll during its Accumulation

Orig Pub : Byul. In-ta biol. AN BSSR, No 2, 1956, (1957) 65-71

Abstract : The investigation of the restoration of chlorophyll in the shoots of Ceratophyllum demersum L. was carried out under conditions of its continued accumulation, with the help of marked atoms. In calculating the relative specific activity of chlorophyll the authors assumed that dicar-

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GODNEV, T.N., akademik; ROTFARB, R.M.

On the feasibility of reciprocal transformation of carotenes and carotenoids. Dokl. AN SSSR 147 no.3:735-737 N '62. (MIRA 15:12)

1. Institut biologii AN Belorusskoy SSR. 2. AN Belorusskoy SSR (for Godnev).
(CAROTENE) (CAROTENOIDS)

GODNEV, T. N., akademik; ROTFARB, R. M.

On lycopene as the probable predecessor of other carotenoids. Dokl. AN SSSR 147 no.4:962-963 D '62. (MIRA 16:1)

1. Institut biologii AN Belorusskoy SSR. 2. AN Belorusskoy SSR (for Godnev).

(Lycopene) (Carotenoids)

17 (3)

AUTHORS: Godnev, T. N., Academician, AS BSSR; Rotfarb, R. H. SOV/20-127-4-51/60

TITLE: On the Theory of the Formation of Porphyrinogenes in Plants

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 907 - 910 (USSR)

ABSTRACT: Nentskiy's assumption (Ref 1) of the common origin of haem and chlorophyll has now been generally recognized. There is no doubt that the initial stages of biosynthesis of these two compounds are identical until the formation of proto-porphyrine. The order of the reaction is recalled. Contrary, the mechanism of the transformation of porpho-bilinogene into porphyrine, that is, into porphyrinogenes of type III, is not so intelligible. The latter are the basis of chlorophyll and haem and their most important porphyrines. According to the data under review the first porphyrinogene formed is uro-porphyrinogene which is the result of a combination of 4 pyrroles (see Diagram (A)). If uro-porphyrinogene were constructed according to type I with the porphyrinogene substitutes being successively situated in β-position: A — P; A — P; A — P; A — P; (A = carboxy methyl, P = carboxy ethyl) the formation mechanism

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of such a compound would be very clear. But the 4th pyrrole nucleus in the molecule of uro-porphyrinogene III is turned by 180° and it is very difficult to understand the formation mechanism of such a molecule of porpho-bilinogene. Several rather complicated, so far hardly proved, and almost speculative hypotheses were suggested (survey in Refs 2-5). They are discussed and criticized. If the considerations mentioned here are correct one way of testing them would be the introduction of compounds of opso-pyrrole-type into a chlorophyll-forming tissue, as is aimed at by the authors. Such an experiment was described in reference 6. The authors decided, however, to take a most simple pyrrole as foreign pyrrole with 2 free α-positions. It was injected into etiolated leek leaves in various concentrations in refined sunflower oil; the leaves were then exposed to disperse light in glass tubes filled with water. The results (Table 1) show that the high pyrrole concentrations entirely suppress the formation of chlorophyll. The formation of chlorophyll starts again (although more slowly) beginning with a dilution pyrrole: Ol = 1 : 10. Then solutions of hydrochloric acid were investigated by spectrophoto-

On the Theory of the Formation of Porphyrinogenes in Plants SOV/20-127-4-51/60

metry. Table 2 shows the results. Thus, the following formation scheme of chlorophyll may be assumed as working hypothesis: monoses and other sources → acetyl CoA (in the cycle of tri-carboxylic acids) → succinyl CoA → amino-levulinic acid → → porpho-bilinogene → amino-methyl-tetra-pyrrane → separation of opso-pyrrole, and its incorporation by the dimethyla motri-pyrrane → uro-porphyrinogene III proto-porphyrinogene → → Mg-proto-porphyrinogene Mg-vinyl-pheo-porphyrine a_5 → → chlorophyllide a → chlorophyll a. There are 2 tables and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut biologii Akademii nauk BSSR (Institute of Biology of the Academy of Sciences, BSSR)

SUBMITTED: May 19, 1959

Card 3/3

USSR / Microbiology. General Microbiology. Physiology and Biochemistry. F-1

Abs Jour: Ref Zhur-Biol., No 16, 1958, 71926.

Author : Godnev. T. N.; Rotfarb, R. M.
Inst : Institute of Biology AS BSSR.
Title : On the Leuko-Compound of Prodigiosin.

Orig Pub: Byul. In-ta biol. AN BSSR, vyp. 2, 1956 (1957), 75-78.

Abstract: A prodigiosin pigment isolated from Bacillus prodigiosus in a pyridine solution was reversibly restored in a vacuum of 0.05 and 0.1 n. by ascorbic acid to a leuko-form which leads to a change of the absorption maximum from 507 to 475 mμ. In the presence of oxygen, the leuko-form is oxidized back to prodigiosin. The authors

Card 1/2

GODNEV, T.N.; ROTFARB, R.M.

Chlorophyll formation in angiosperms in the dark. Biul.Inst. biol.AN BSSR no.3:85-88 '58. (MIRA 13:7)
(CHLOROPHYLL) (ANGIOSPERMS)

SHLYK, A.A.; ROTFARB, R.M.; LYAKHNOVICH, Ya.P.

Criteria for the radiochemical purity of chlorophyll. Biul.Inst. biol.AN BSSR no.3:115-120 '58. (MIRA 13:7)
(CHLOROPHYLL)

GODNEV, T.N., akademik; ROTFARB, R.M.

Photosynthesis and chlorophyll formation at temperatures below zero centigrade. Dokl.AN SSSR 134 no.4:963-964 O '60. (MIRA 13:9)

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(Plants, Effect of temperature on)
(Photosynthesis)
(Chlorophyll)

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Chlorophyll synthesis in darkness in angiosperms with partially shaded green leaves. Biul. Inst. biol. AN BSSR no.5:109-112 '60. (MIRA 14:7)

(CHLOROPHYLL) (ETIOLATION)

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The possibility of photosynthesis and chlorophyll formation at temperatures below the freezing point. Biul. Inst. biol. AN BSSR no.5:113-115 '60. (MIRA 14:7)
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ROTFARB, R.M.

Chromatographic separation of plant pigments. Biul. Inst. biol. AN BSSR no.2:72-74 '57. (MIRA 11:2)
(Chromatographic analysis) (Pigments) (Plants--Chemical analysis)

ROTFARB, R.M.

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Leuco compound of prodigiosine. Biul. Inst. biol. AN BSSR no.2: 75-58 '57. (MIRA 11:2)
(Prodigiosine)

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Occurrence of phytol in the protochlorophyll of etiolated leaves.
Dokl. AN SSSR 140 no.6:1445-1447 O '61. (MIRA 14:11)

1. AN Belorusskoy SSR (for Godnev).
(Phytol) (Chlorophyll) (Etiolation)

USSR/Plant Physiology. Photosynthesis I

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58188

Author : Rotfarb R. M.
Inst : Institute of Biology, Academy of Sciences Belorussian SSR
Title : On the Method of the Chromotography of Plant Pigments

Orig Pub : Byul In-ta AN BSSR, No 2, 1956 (1957), 72-74

Abstract : A system of small tubes, filled with various adsorbents and connected with each other by rubber tubes was used to separate plant pigments, instead of using a single adsorbent tube. The system may be assembled or disassembled during the process of chromatography. The advantage of this method is in the fact that sections of the chromatogram may prove to be different solvents.

Card 1/1

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GODNEV, T.N.; ROTFARB, R.M.; SHLYK, A.A.

Biosynthesis of phytol by angiosperm seeds in dark. Fiziol. rast. 7 no.1:81-82 '60. (MIRA 13:5)

1. Institute of Biology, B.S.S.R. Academy of Sciences, Minsk. (Phytol)

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Chlorophyl synthesis in angiosprems in darkness [with summary in English]. Fiziol.rast. 6 no.1:36-41 Ja-F '59. (MIRA 12:2)

1. Biology Institute, Byelorussian S.S.R. Academy of Sciences, Minsk.
(Chlorophyll) (Plants, Effect of light on)

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On the particular features of biosynthesis of two chlorophyll components in the process of restoration. Dokl. AN SSSR 113 no.6 1324-1327 Ap '57. (MLRA 10:6)

1. Akademik Akademii nauk Belorusskoy SSR (for Godnev).
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(Chlorophyll)